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PHOTOGRAPHIC INTERPRETATION REPORT

CHRONOLOGY OF UFA AIRCRAFT ENGINE PLANTS 26A AND 26B USSR

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CHRONOLOGY OF UFA AIRCRAFT ENGINE PLANTS 26A AND 26B USSR

INTRODUCTION

This report is a study of the chronological development of Ufa Aircraft Engine Plants 26A and 26B respectively). The plants are located at 54-47-35N 056-07-28E and 54-47-58N 056-04-18E, 7.5 and 6.5 nautical miles (nm), respectively, northeast of the center of the city of Ufa, USSR (Figure 1). The plants are approximately 2 nm apart and are believed to be interrelated in their function of jet- and rocket-engine production. 1,2/ They are served by numerous all-weather roads and rail spurs of the Ufa-Chelyabinsk rail line and are connected by road to Ufa Airfield South approximately 18 nm south-southwest of the plants.

Photography covering Plants 26A and 26B includes 1942 and 1943 World War II photography of good interpretability (Figures 2 and 3), film of fair-to-poor interpretability obtained between 1961 and 1966, and

Plants 26A and 26B (Figure 4) have expanded to cover areas of 335 and 250 acres, respectively, since the first photography in 1942. Recent photography reveals that Plant 26A (Figure 5) encompasses approximately 2.9 million square feet of roof cover and Plant 26B (Figure 6) approximately 2.1 million square feet. Although Plant 26A has only a very small engine test facility and meager administration/engineering support, the plant includes a large amount of industrial production floorspace and will soon have an even greater capability when a new 840,000-square-foot fabrication/assembly building is completed. Plant 26B also includes a large amount of production floorspace and, in addition, 7 large and 6 smaller engine test cells. The test function at this plant will be increased when a new building containing 10 new probable horizontal engine test cells is completed, perhaps in 1968.

An activity possibly related to Plants 26A and 26B is Ufa Static Test Facility Ufa Rocket Engine Test Facility), located approximately 10.5 nm north of Plants 26A and 26B. This facility contains 4 probable horizontal rocket engine test positions and has been determined to be generally similar to the Nizhnyaya Salda Static Test and Faustovo Rocket Engine Test Facilities

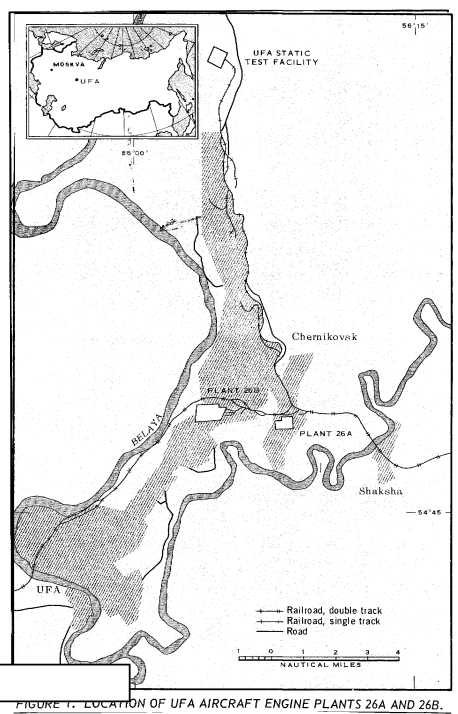

FIGURE 1. LOCATION OF UFA AIRCRAFT ENGINE PLANTS 26A AND 26B.

respectively) and the Zelenogorsk Static Test Facility It is also possible that the Ufa Static Test Facility is associated with rocket engine fuel and lubricants research and development conducted at the nearby Ufa Petroleum Refinery Novo Chernikovsk

Historically, Plants 26A and 26B have been of considerable importance as major aircraft engine producers. Plant 26A was set up by the United States at the beginning of World War II. Plant 26B came into existence with the evacuation of equipment from Rybinsk, USSR, in 1941 and was expanded by the addition of machinery from the Junkers Dessau plant in in 1946. It is reported that, during World War II, production at Plants 26A and 26B included both radial air-cooled aircraft engines and in-line water-cooled types. In the postwar period the plants produced primarily turbojet engines for the MIG-series aircraft. 2/

Detailed information on structures in the plants is provided in Tables 1 and 2 and Figures 5 and 6.

HIGHLIGHTS OF CHRONOLOGY

1942

photography of Plants 26A and 26B revealed that they included approximately 1.3 million and 1.1 million square feet of roof cover, respectively. Plant 26A consisted primarily of 4 assembly buildings (items 18 and 24-26, Figure 5), 4 shops (items 30E, 31, 45, and 47), and an inspection/test building (item 16A). The test cells of the latter building had not been completed at the time of the photography. Plant 26B consisted primarily of 1 large and 1 smaller assembly building (items 21 and 33, Figure 6) and a forge/foundry (item 14B). No known engine test facilities were operational at either plant in this period; however, only simple test stands, which are not readily discernible, would have been required for tests of the radial air-cooled aircraft engines which were in production at that time.

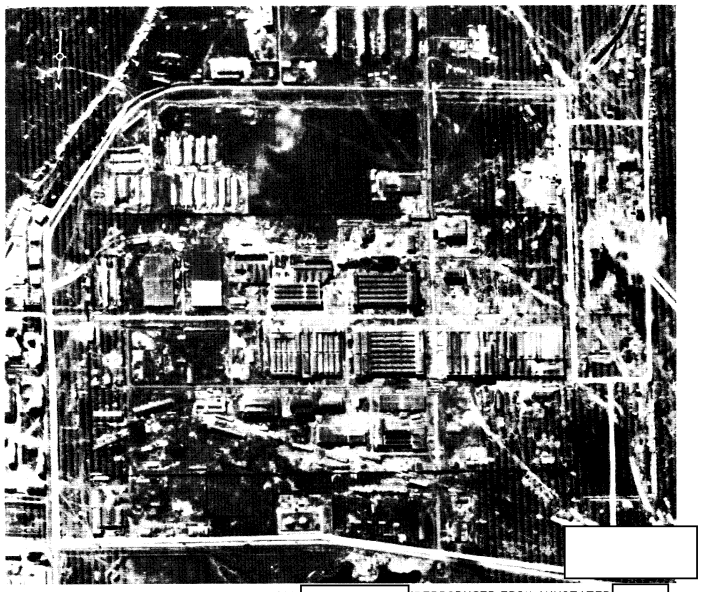

FIGURE 2. UFA AIRCRAFT ENGINE PLANT 26A, (REPRODUCED FROM ANNOTATED WORLD WAR II PHOTOGRAPHY WHICH HAS BEEN RETOUCHED).

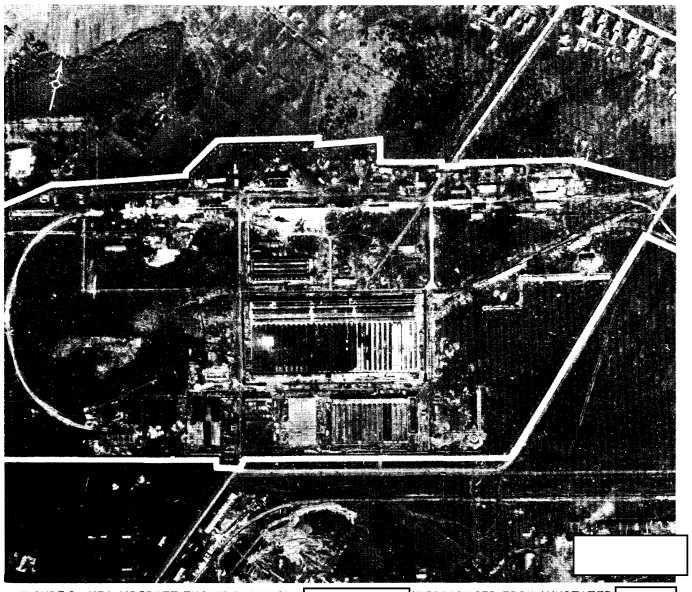

FIGURE 3. UFA AIRCRAFT ENGINE PLANT 26B, (REPRODUCED FROM ANNOTATED WORLD WAR II PHOTOGRAPHY WHICH HAS BEEN RETOUCHED).

1962-1963

In the 20 years since the previous coverage, Plant 26A was expanded by only a few significant structures, but Plant 26B was expanded considerably.

The 4-cell engine test facility (item 16B, Figure 5) at Plant 26A was completed, a major shop was expanded (items 30A and 30B), and a new assembly building (item 4) and numerous small utility/support and administration buildings were completed. Plant 26B was provided with a new building containing 7 large U-type jet-engine test stands (item 15A, Figure 6) with diffusers of varying heights and 6 small U-type engine test cells (item 15B) with unique silencers/deflectors. In addition, a large new assembly-type building (item 22) was constructed, the shop space of the plant was more than doubled, and its utility and administration support facilities were enlarged.

1964-1965

Only very minor improvements were made at Plants 26A and 26B during this period. At Plant 26A a new small shop (item 3, Figure 5) and a small warehouse (item 10) were built; at Plant 26B only 1 medium-sized new shop/assembly building (item 18, Figure 6) was completed.

1966-1967

In this period, at Plant 26A, 1 new medium-sized assembly building (item 22, Figure 5) was added, a major shop was expanded (items 30C and 30D), and, most importantly, a very large new fabrication/assembly building (item 1) was observed under construction. The roof cover of this building will be approximately 840,000 square feet. At Plant 26B no significant modifications or completion of new structures occurred during 1966-1967, but early work on a new probable 9- or 10-cell engine test building (item 6, Figure 6) was noted.

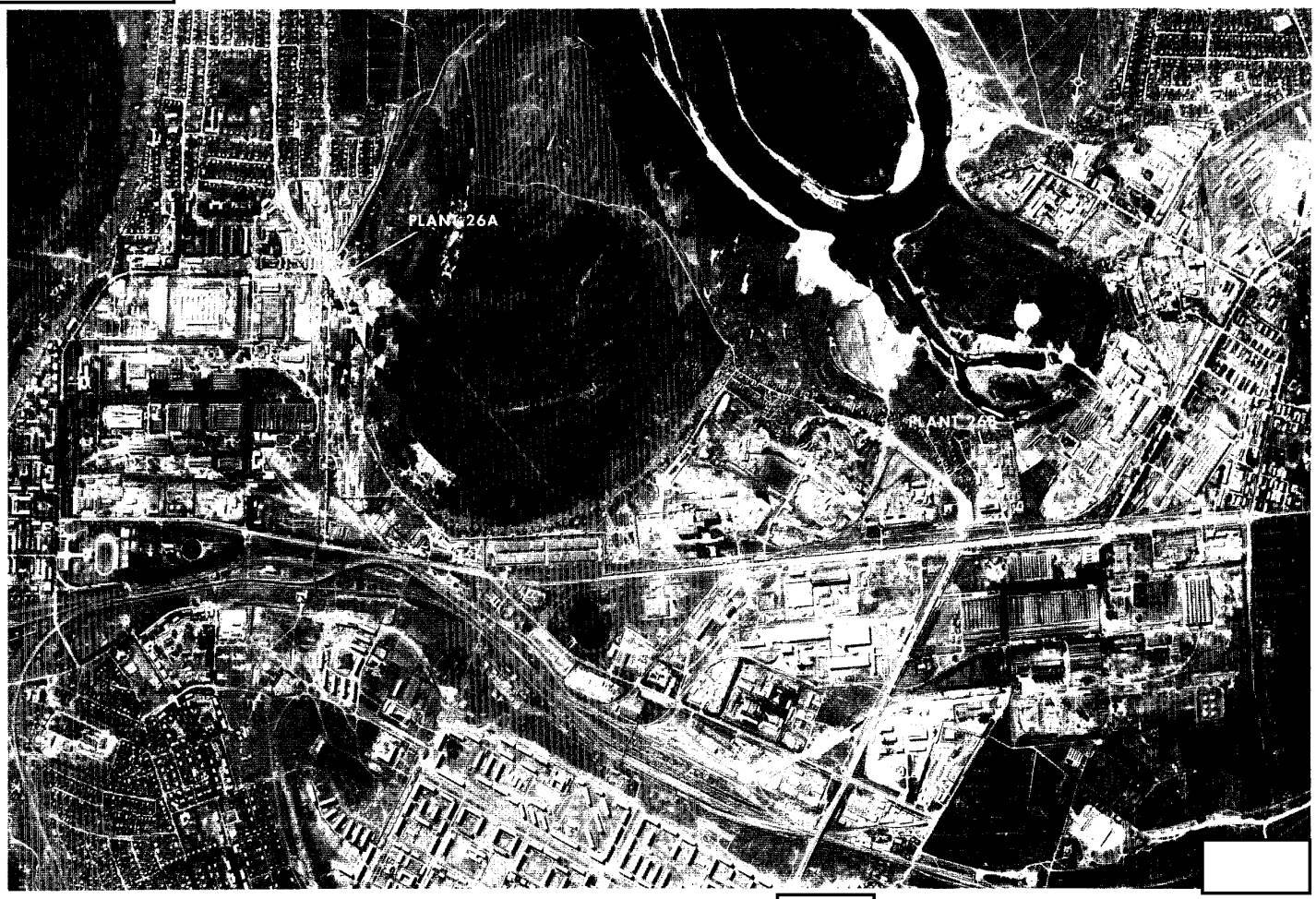

FIGURE 4. UFA AIRCRAFT ENGINE PLANTS 26A AND 26B

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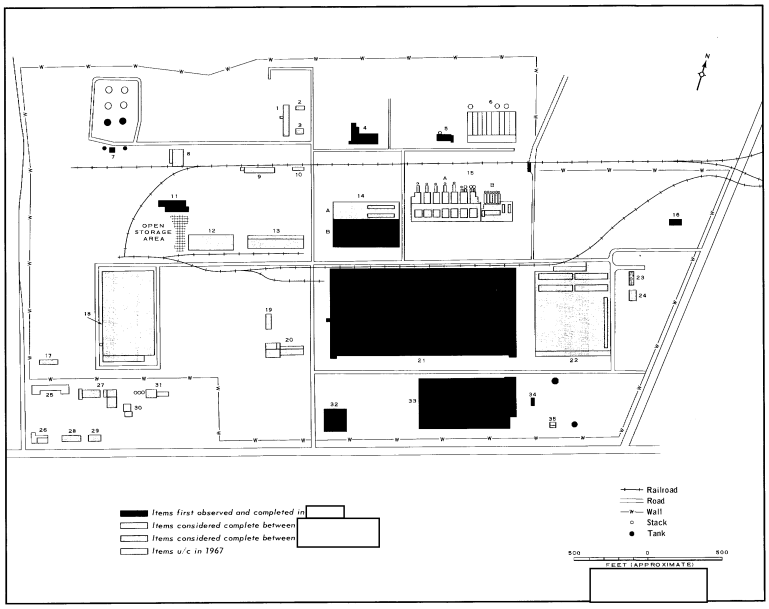

FIGURE 6. LAYOUT OF PLANT 26B.

Table 2. Data on Ufa Aircraft Engine Plant 26B (Item numbers are keyed to Figure 6)

Item No	Function	Dimensions (ft)* L W H	Roof Cover (sq ft)	Date First Observed**	Comments
1	Utility bldg				
2	Utility bldg				
3	Utility bldg				
4	Boilerhouse				
5	Utility bldg				
6	Prob engine test bldg				Bldg aprx 20% complete. Will prob house 10 horizontal test cells. Pipe sections in area are aprx [redacted] in diam
7	Pump bldg				
8	Transshipment bldg				
9	Transshipment bldg				
10	Transshipment bldg				
11	Warehouse				
12	Warehouse				
13	Warehouse				
14A	Shop				
14B	Forge/foundry				
15A	Engine test bldg				Bldg contains 7 large U-type engine test cells. Shorter diffusers are aprx [redacted] high
15B	Engine test bldg				Contains 6 small U-type engine test cells. The date of completion of their silencers/ deflectors cannot be established with certainty, but is prob 1963
16	Admin bldg				
17	Utility bldg				
18	Shop/assembly bldg				Completed by [redacted]
19	3-cell water cooling tower				
20	Diesel powerplant				Bldg prob completed in 1942, but this cannot be established due to interpretability of [redacted] photography
21	Final assembly bldg				
22	Assembly-type bldg				
23	Utility bldg				
24	Utility bldg				
25	Utility bldg				
26	Utility bldg				
27	Utility bldg				
28	Utility bldg				
29	Utility bldg				
30	Utility bldg				
31	Switching bldg				
32	Warehouse				
33	Assembly bldg				
34	Utility bldg				
35	Pump bldg				

*All measurements are accurate to 15' or 5%, whichever is greater.
**Items were complete when first observed unless otherwise noted.

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REFERENCES

MAPS OR CHARTS

SAC series, scale 1:200,000

DOCUMENTS

1. NSA. *Possible Association Between the Dnepropetrovsk Missile Development and Production Center and Ufa,* 11 Jul 62 (TOP SECRET)

2. GCHQ. 3/ARU-E/C3112, *Further References to Aero-Engine Factory No. 26, Ufa, to Co-located Telegraphic Address "Disk" and Particulars of Telegraph Office 30,* issued J25E/A/17/1/1961 (TOP SECRET)

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CIA. C-DI5-82,973

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